DOCUMENT RESUME

ED 242 354 JC 840 143

TITLE A Working Partnership for 1993: Linking Community Colleges and Business. Conference Summary.(Sacramento, California, May 13, 1983).
PUB DATE Nov 83
NOTE 38p.
PUB TYPE Reports - Descriptive (141) -- Viewpoints (120) -- Collected Works - Conference Proceedings (021)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS College Curriculum; *Community Colleges; *Cooperative Programs; Financial Support; Governance; Government School Relationship; Information Needs; *Job Training; Labor Market; Program Descriptions; *School Business Relationship; State Government; State Programs; Technological Advancement; Two Year Colleges; Vocational Education
IDENTIFIERS *California

ABSTRACT

Summaries are provided of the presentations, discussions, and major conclusions of a conference convened in May 1983 to develop mechanisms for improving the linkages between industry and community colleges in California. Introductory material offers an overview of the conference's goals, employment training in California, and the role of the community colleges. The next section summarizes the major problem areas and potential solutions that were identified during the conference regarding employment training and vocational education. Next, summaries are presented of the following presentations: "History of Partnerships between Colleges and the Private Sector," by Sam Farr; "Model Programs in the Los Rios Community College District," by David Mertes; "The Governor's Approach to Employment Training in California," by Kirk West; "Exemplary Programs in San Mateo Community College District," by Lois Callahan; "Working Partnership between the Sacramento Area Commerce and Trade Organization and the Community Colleges," by Alan Ewen; "Partnerships between the American Electronics Association and the Community Colleges," by Amy Klausner; "The Role of the Employment Training Panel," by Elinor Glenn; "Overview of Community College-Industry Partnerships in California," by Gerald Hayward; and "Employment Training and the Legislature," by Bill Greene. Finally, informal discussions regarding funding, governance, private sector involvement, use of new technologies, labor market data needs, and curriculum and teaching are summarized. (LAL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

G. Hayward

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

✓ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

ED242354

JC 840 143

CONFERENCE SUMMARY

Reprinted November 1983

Sponsors

Assembly Committee on Economic Development & New Technologies

California Association of Community Colleges

Chancellor's Office, California Community Colleges

Los Rios Community College District

Joint Committee on Science & Technology

Senate Office of Research

Cover Design

Karen Treanor

Conference Photos

Detto Oliver

June 1983

The growth of California's economy in the next decade will depend on an effective educational system. Each year, over $500 million dollars of state funds flow through the community colleges to prepare some one million students for work.

Technological revolutions alter the skill requirements of the workforce. To ensure the continued success of our fast-moving economy, the relationship between the private sector and the community colleges also will have to change. A new partnership must be built.

"A Working Partnership for 1993: Linking Community Colleges and Business" was a conference convened to improve employment preparation programs. The conference brought together high level policymakers from the private sector, education and government to develop mechanisms for improving the partnership between industry and community colleges. The following report represents the beginnings of this partnership.

Hopefully this will prove useful in our joint efforts to continue improving the economy and educational system of the state.

SENATOR ART TORRES, Chairman
Joint Committee on Science
and Technology

ASSEMBLYMAN SAM FARR, Chairman
Assembly Committee on Economic
Development and New Technologies

ELISABETH KERSTEN, Director
Senate Office of Research

GERALD C. HAYWARD, Chancellor
California Community Colleges

DR. JAMES KELLERMAN, Director
California Association of
Community Colleges

DAVE MERTES, Chancellor
Los Rios Community College
District

American productivity still relies as much, if not more, on people--you remember them--as on machines. Traditionally, about half our productivity growth comes from increases in individuals' skills and knowledge.

Despite our lengthening unemployment lines, we are suffering from shortages of critical workers. . .This problem will worsen dramatically in coming years when greatly accelerating technological change confronts a workforce which, for the most part, could not find its way home in the Techno-Era around the corner.

We have no choice but to equip ourselves for the future that's upon us.

From "Workers of the Future, Retool! Nothing to Lose But Your Jobs," The Washington Post, May 9, 1982, by Pat Choate and Noel Epstein.

PARTNERSHIP BETWEEN INDUSTRY AND COMMUNITY COLLEGES: AN OVERVIEW

On May 13, 1983, more than 100 Californians met in Sacramento for a working conference devoted to employment training issues. Attendees included a host of community college presidents and superintendents; vice-presidents, personnel directors and managers of business firms; labor representatives; and legislators and their staffs.

The goal of the conference was explicit: to develop mechanisms to improve linkages between the private sector and community colleges. The use of the term "linkage" shows that we see employment training efforts as a two-way street: we hope to enhance the training and services provided by community colleges in fields needed by the private sector and, at the same time, improve private sector support of the community colleges.

Employment Training in California

California runs a billion dollar industry of job training and retraining. Yet, in spite of a tremendous expenditure of time and money, our efforts have become less and less productive. Our state's economy and labor market needs change so rapidly that the skills learned by today's students may be obsolete before they are able to obtain a job, while the skills of those currently employed are no longer required. Many jobs go unfilled because of a lack of appropriately trained people.

We are faced with a challenging and formidable task: to provide relevant, effective training to California's existing and potential workforce. Meeting this challenge is critical to our state's economic health.

Role of the Community Colleges

Our state's overall employment training effort encompasses a variety of programs. The community colleges play an important role within this overall training effort. Of the estimated $720 million in federal and state funds that California spends annually on employment preparation programs for adults, nearly $562 million is devoted to vocational education in community colleges. These colleges must be a main focus of our efforts to enhance the state's workforce.

David Mertes and Elisabeth Kersten
Discuss California's Labor Force Needs

More than 100 community college campuses are located throughout the state, serving a wide variety of approximately one million vocational education students. We know that over one million Californians are unemployed or will soon

TABLE OF CONTENTS

Page

PARTNERSHIP BETWEEN INDUSTRY AND COLLEGES:
AN OVERVIEW..... 1

SUMMARY OF FINDINGS..... 3

OPENING SESSION AND INTRODUCTIONS..... 6

Sam Farr, 28th Assembly District..... 6
Dr. David Mertes, Chancellor,
Los Rios Community College District..... 7
Kirk West, Secretary of Business,
Transportation & Housing Agency..... 8

MODEL PARTNERSHIP EFFORTS: SUMMARY OF PRESENTATIONS..... 9

Dr. Lois Callahan, President,
San Mateo Community College..... 9
Alan Ewen, Executive Director, Sacramento
Area Commerce and Trade Organization.....12
Amy Klausner, Technical Training Consultant,
American Electronics Association.....14
Elinor Glenn, Member, Employment Training Panel.....15
Gerald C. Hayward, Chancellor,
California Community Colleges.....16
Senator Bill Greene, 29th District.....17

FORUM DISCUSSIONS: SUMMARY OF PROBLEMS AND SOLUTIONS.....18

Forum A: Funding.....18
Forum B: Governance.....19
Forum C: Private Sector Involvement.....21
Forum D: New Technologies.....23
Forum E: Labor Market Data Needs.....24
Forum F: Curriculum/Teaching.....26

EPILOGUE.....28

APPENDIX

List of Conference Participants.....A1

face unemployment. Many lack the skills needed in the current labor pool. The community colleges must take the initiative to learn the needs of the labor force and provide appropriate training to those who can fill these needs.

Organization of the Report

We would like to share the results of this exciting conference with you in the following summary. The narrative begins with a summary of the major findings and recommendations. Summaries of the presentations by speakers from the community colleges, private sector associations and the State Legislature follow. The narrative then focuses on specific issues raised by conference participants during a series of group workshops. Finally, we discuss the outcome of the conference.

SUMMARY OF FINDINGS

Throughout the day, the conference participants identified a variety of problems regarding employment training and vocational education. Some of these related to the State's overall training and education efforts, while others focused specifically on the community colleges. This section summarizes the major problem areas and some of the potential solutions that were identified during the group forums.

Funding and Administration

The most frequently cited concern related to the funding and administration of employment training and vocational education. Conference participants were specifically concerned about delineating the role of the community colleges in these areas. There is no statewide, unifying policy regarding the roles of the different agencies that provide employment training or vocational education (i.e., "service providers").

Funding is distributed by various federal, state and local agencies, each with its own administrative agency, advisory group, policies and practices. The community colleges and other service providers must compete for some of the funding. This results in duplication of effort and hinders cooperation between the various providers.

The funding base for community colleges changes from one year to the next and relies heavily on government resources. Long-term planning and policy development is hindered by the lack of a stable funding base. Furthermore, the funding for up-to-date facilities and equipment often is inadequate.

The following solutions were offered by conference participants.

- Establish a cohesive, statewide public policy for vocational education and employment training, delineating the priority areas and the role of various service providers. Allow flexibility to accommodate the needs of individual labor market areas.

- Encourage local service providers to communicate and cooperate in their training efforts, in order to reduce duplication of effort and enhance information sharing.

- Assess different methods of funding vocational education in the community colleges, in order to enhance the predictability and consistency of funding.

- Enhance use of nongovernment funding sources, including: partial payment by employers, deferred payment by students after they obtain jobs and funding by private foundations like those in the primary and secondary schools.

- Expand the existing efforts of colleges to use equipment and facilities in a cooperative manner (i.e., among several campuses or between colleges and industry).

- Provide vocational education and employment training at industry worksites, using industry's equipment and facilities.

- Offer tax incentives for the private sector to donate up-to-date equipment and facilities to community colleges.

Labor Market Data Needs

Community college vocational education programs sometimes are not properly matched to the needs of private industry. Some of the underlying problems include: private industry does not clearly articulate its needs; information that is available is too general and typically lags six months behind current circumstances; and there is no centralized data bank of accurate and timely labor market information.

The community colleges do not always make adequate use of the existing, albeit imperfect, information sources. Even when information is available, bureaucratic regulations may be too rigid to allow on-going or rapid changes in curriculum based on a changing labor market.

Finally, community college counselors have major responsibility for providing vocational guidance, but frequently lack the knowledge necessary to be effective. Their knowledge of current labor trends may be inadequate.

The participants discussed a variety of approaches to these problems.

- Establish a centralized computer base of information about labor market needs (e.g., industry needs, compilation of want ads).

- Encourage community colleges to acquire information from existing sources such as the private industry councils.

- Permit more flexibility in regulation of curriculum, programming and tenure practices.

- Assess the existing skills of community college counselors and provide retraining as needed. Invite representatives from industry to advise students on up-to-date trends in their fields.

Private Sector Involvement

All too often, vocational education programs are designed without adequate consultation with private industry. Existing forums for communication between colleges and industry may not be used effectively. When employers do participate in curriculum planning and program development, they sometimes choose representatives who cannot attack the problem with solid technical advice or resources.

- Establish reliable, on-going channels of communication to discuss areas of mutual interest; e.g., cooperative goals of colleges and industry, labor market needs and curriculum planning.

- Enhance use of existing channels of communication such as industry associations, college associations and college program advisory committees. Appoint executive level college administrators to serve on industry-education councils.

- Encourage private sector involvement at three levels: chief executive officer who can make a commitment to cooperate and provide funding; technical employees who will assist in curriculum design, staffing, and provision of equipment; and personnel officers who make hiring decisions.

Curriculum/Teaching

Changing demands of the job market require that vocational education curricula be continually redesigned, evaluated and updated. Although colleges attempt this task through program advisory committees, the committees sometimes are not positive devices for change. Additionally, vocational courses are only as effective as the instructors that teach them. Existing teacher standards and tenure practices do not ensure a supply of qualified instructors to teach courses in new and developing technologies.

- Enhance the effectiveness of program advisory committees. Ensure that members are closely aligned with the private sector. Utilize labor market data to refine curriculum.

- Use nontraditional methods of training and retraining instructors, including industry internships or integrated computer instruction.

- Encourage continuing education of existing teachers by offering sabbaticals, release time, industry exchange programs or tax incentives.

New Technologies

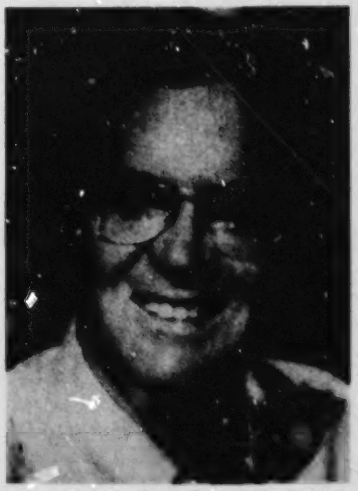
Technology is important as an administrative or resource management tool and as a subject of training courses. Some of the campuses do not make adequate use of technology, while others do not "market" their technological capabilities to the private sector. Conference participants suggested the following solutions.

- Enhance use of technology in order to offer courses to a wider audience (e.g., students who are handicapped or located in isolated areas); offer more effective instruction (e.g., videotape lectures by "master" instructors); and provide more flexibility in scheduling and course offerings.

- Encourage community colleges to expand their efforts in making private industry aware of their capabilities. Use "marketing" techniques such as those used by innovative private universities.

ASSEMBLYMAN SAM FARR

History of Partnerships Between Colleges and the Private Sector



Assemblyman Sam Farr, 28th District

Sam Farr was first elected to the Assembly in November 1980. He is chairman of the Assembly Committee on Economic Development and New Technologies, and vice-chairman of the Policy Research Management Committee. Prior to election as an Assemblyman, Mr. Farr worked with the State Legislative Analyst to review California's categorical aid programs to elementary schools, with the Assembly Constitutional Amendments Committee, and as a county supervisor in Monterey.

The California Commission on Industrial Innovation was recently asked to study the barriers to industrial growth in the United States. A majority of the Commission's recommendations related to education and job training. One member highlighted the "definite, dire need to rearrange our educational system to provide people with skills for the jobs that are coming."

Employment preparation is big business. California spends approximately $1.3 billion each year for training and retraining. The private sector spends an additional $2.5 billion per year on training. In spite of this vast expenditure of resources, there is no coordinated system of service delivery. Building a partnership between the community colleges, government and the private sector will result in more efficient use of resources and more relevant training. There simply is not enough money to operate independently, particularly in the face of foreign competition.

Hopefully, the new Job Training Partnership Act (JTPA) will provide the framework for this partnership. In the Act, the federal government has given important responsibility to the states and to private industry. Local private industry councils--with a majority of members from private industry--will package the local programs.

Furthermore, the community colleges are ideal leaders for building partnerships, since they are local institutions. Chief executives from each campus must take the lead in contacting their counterparts in private industry and establishing professional dialogs. In exchange, industry must develop more accurate labor market data so that community college training programs are relevant to their needs.

Dr. David Mertes, Chancellor
Los Rios Community College District

DR. DAVID MERTES

Model Programs in the Los Rios Community College District

Dave Mertes has served as chancellor of the Los Rios Community College District since September 1981. He also serves as founding president of the California Community College Chief Executive Officers Association, vice-president of the California Association of Community Colleges (CACC), and member of the State Chancellor's Advisory Committee. Prior to joining Los Rios, Dr. Mertes held administrative and teaching positions at the high school and college levels.

The Los Rios District has been a leader in improving vocational training efforts. Among model programs designed by the District, the Learning Assessment and Retention Consortium (LARC) was designed to assess students' capabilities, aptitudes and interests prior to enrolling in courses. A second, very promising program evolved as a result of the changing employment market and continuing high unemployment rate in the Sacramento area. The Regional Employment and Training Needs Assessment (RETNA) project was organized in late 1982 by a coalition of local business, industry, labor and educational leaders. Its purpose is to link the employment requirements of the private sector with the education and training capabilities of the Los Rios District and other local educational institutions.

RETNA project staff are developing a computer model based on periodic employer surveys to assess employment demand and training needs. The surveys will also furnish data on the specific qualifications and training needed by employees in the various occupations. Members of RETNA will use the information to:

- provide training opportunities consistent with employment needs,
- provide employment market coordination between labor, private employers and training agencies, and
- recruit new employers into the service area.

The RETNA information also will be used by the Los Rios District to develop new training efforts and upgrade existing vocational programs. Working with the RETNA model--and linking it with the student capability assessments that are part of LARC--Los Rios is certain that training programs can be developed in a highly coordinated and cost-effective manner, benefitting both employers and workers.

KIRK WEST

The Governor's Approach to Employment Training in California

Kirk West, Secretary of Business, Transportation and Housing Agency

Kirk West was appointed secretary of the Business, Transportation and Housing Agency in January 1983. His agency includes 14 departments with over 33,000 employees and an annual budget of $2.5 billion. He also serves as a member of the Governor's cabinet. Prior to his appointment, Mr. West served as executive vice-president of the California Taxpayers' Association, chief deputy state controller, and director of the State Department of Finance.

The foremost task for economic growth in California is to provide quality education at the primary, secondary and postsecondary levels. A strong partnership linking government, education and industry is vital to maintaining the quality of the educational system. This is a key to being competitive with other states and nations and to attracting new industry to California.

The community colleges play an important role in basic education and employment training. The changing economic structure of our state will require that some portion of the existing workforce be retrained in other fields. A recent study predicted that one-half of the manufacturing jobs in California will become obsolete every ten years. Many tasks previously accomplished by people are now being automated. Thus, this is a critical area for retraining.

Many campuses have recognized the need for working with business and have initiated outreach efforts at the local level. The colleges are successfully providing services such as assessing industry needs and developing training programs that fulfill these needs. Colleges also are coordinating with businesses to use local industry equipment and facilities or to obtain donated equipment. These efforts must be expanded throughout the state.

There is a need for continued learning throughout a person's lifetime. The partnership between the public and private sectors is critical to this process.

MODEL PARTNERSHIP EFFORTS: SUMMARY OF PRESENTATIONS

Dr. Lois Callahan, President
San Mateo Community College

DR. LOIS CALLAHAN

Exemplary Programs in San Mateo Community College District

Lois Callahan is president of the College of San Mateo where she also served as dean of instruction and director of cooperative education. She has been singularly successful in introducing technology into the delivery systems of the college and into industry training programs. Prior to joining San Mateo College, Dr. Callahan served as dean of instruction for occupational education at San Jose City College where she was the first woman dean of vocational education in the California community college system.

The College of San Mateo (CSM) is working with the private sector to fulfill local job needs. A variety of these partnership efforts are described below.

Business-Industry Task Force. The Task Force, made up of directors from various college departments, is attempting to streamline the College's approach to industry-education partnerships in order to enhance private sector involvement. They have assessed CSM's past efforts in industry-education collaboration, developed a listing of all area companies to assist staff in marketing college services, and established guidelines to facilitate provision of services to the private sector.

Hospital Consortium. In order to meet a long-term need in nursing staff, CSM enlarged its nursing program. The Hospital Consortium of San Mateo County provided partial funding with an initial donation of $160,000 in 1980. To enable the College to accommodate additional students, the consortium is continuing its support with $120,000 to fund the first-year nursing courses in 1983-84. Program activities were jointly conducted by CSM and the Consortium. The program is the first in the state to be developed in a cooperative manner to meet a health care skill shortage.

CWETA. The CWETA program was designed to train and place people in fields where critical manpower shortages exist. One of the industries which lacks well-trained manpower is electronics and related technologies. The American Electronics Association estimates it will need over 113,000 technical professionals and 140,000 technical paraprofessionals by 1985.

CSM became a center for CWETA entry-level training programs in October 1980. Its model training program was designed jointly by the College and 14 high technology firms. Eighteen companies now participate in the program.

The approach is three-pronged. First, individuals with no background in electronics are given technical, entry-level training skills at the college. To date 232 trainees have participated in this component of the CWETA project. Second, CSM provides on-site training at individual corporations to prepare current employees for upgrading to a higher status. In this upgrade group there have been 248 participants. The third component, a microwave training program, brings together the resources of College of San Mateo and the Los Angeles Community College District. Company employees upgrade their skills on-site and in a mobile van equipped with highly specialized equipment. Key features of the training include: extensive private sector involvement; selectivity in accepting students; nontraditional, intensive time schedule; "real world" atmosphere; and up-to-date equipment and instructors.

Welding Program. The Welding Technology program at CSM has a long history of advisory committee support and a high job placement record. A high-cost program, Welding Technology was slated to be reduced because of financial constraints. Vigorous fundraising by the advisory committee raised $50,000 to restore the program. The majority of the donations came from industry which makes use of program graduates.

Retraining Displaced Workers. The Employment Training Panel has provided two grants to CSM for training displaced workers. One grant will support retraining for 28 former Ford Motor Company/UAW employees for a period of 90 days. Another will be used for retraining former Ford Motor Company/UAW workers in general welding.

Telecommunications Training Consortium. To help meet the growing demand for telecommunications technicians, the Telecommunications Training Consortium has provided funds to establish a training program at Skyline College, one of three colleges in the San Mateo County District. Four companies have contributed $90,600, and contributions from other companies are currently being sought. This partnership between various companies from the industry and the College District ensures expansion of the pool of employable technicians.

KCSM-TV, Channel 60. The College District holds a license for KCSM-TV, which is both a training ground for broadcast students and a producer of instructional material. A recently produced credit telecourse was underwritten by several private companies. The course, which received the 1982 Instructional Television Excellence Award from the Pacific Mountain Network, has been adopted by more than 20 colleges and universities throughout the country.

Contract Classes. Perhaps the most flexible mechanism through which the three colleges respond to industry requests for specific training packages is contract classes. The industry covers all costs of training provided through contract. Courses can be scheduled without reference to the standard academic calendar and can be limited to persons specified by the industry. Employees of the industry often serve as instructors.

Dr. Lois Callahan identified the community college as a valuable resource in meeting state needs and cited a number of benefits to collaboration. Benefits for students include hands-on experience and enhanced job opportunities.

Colleges gain by the updating of curriculum which ensures that program completers will have skills needed in industry and by expanded state-of-the-art lab opportunities. Among industry benefits are well-trained and more productive current and future employees, expanded labor pool and reduced industry training and recruitment costs.

Dr. Callahan raised a number of issues surrounding cooperative agreements for consideration. Among them were: Should companies have the freedom to work with any district? Can an institution or district adapt its program to company needs and requirements without altering the mission and endangering the essential goal of the institution? What is the role of company-specific occupational training in the total vocational education program? How should funding be determined? Can the quality and rigor of programs be maintained in company-specific training?

ALAN EWEN

Working Partnership Between SACTO and the Community Colleges

Alan Ewen
Executive Director, SACTO

Alan Ewen is executive director of the Sacramento Area Commerce and Trade Organization (SACTO), a private economic development corporation. During his business career, Mr. Ewen has served as vice-president of the Pacific Molasses Company and senior vice-president of the Property Subsidiary of McCulloch Oil Corporation. He was also assistant director of intercollegiate athletics at the University of Southern California.

The Sacramento Area Commerce and Trade Organization (SACTO) is a private, nonprofit economic development organization. Its mission is to attract new commercial and industrial enterprises to the capital city region--Yolo, Sacramento and Placer counties. Since its inception in 1975, SACTO has been a driving force in building a more diverse economy throughout the region.

SACTO's success is due, in part, to its continuous efforts to improve the relationships between the institutions of society: industry, business, labor, the professions, government, education, health services, cultural foundations and recreation. The Board of Directors includes representatives from many of these institutions (e.g., professional, business, industrial and governmental leadership of the region).

Most of SACTO's funding is provided by more than 250 investors that represent government, the professions, manufacturing and commerce. This broad base of financial support reflects the awareness among both the private and public sectors of the need to develop a more diversified regional economy.

SACTO acts as a single, centralized contact for firms that are interested in locating in the region. The organization provides valuable resources by publishing a variety of reports: a review of financial sector salaries, site locational analyses, directories of manufacturers and processors in the region and regional business profiles. SACTO also offers the expertise of its Board members who meet with interested industry representatives.

SACTO has emphasized the importance of planning vocational education programs in community colleges to best coincide with the needs of local businesses and industries. In November 1982 and March 1983, SACTO and the Los Rios Community College District jointly sponsored a two-part conference to discuss the perceived shortfalls in labor market needs and supply, and possible avenues of mutual assistance between business and the schools. The conferences provided the basis for forming a joint committee to continue the cooperative efforts between industry and educational systems.

By all measures, SACTO has fulfilled its goals of economic development. It has attracted an impressive array of more than 120 companies to the area, including Shugart & Associates, Hewlett-Packard Inc., Signetics Corporation, Computer Sciences Corporation, Federal Express, Intel Corporation, General Electric Medical Systems and Teledyne MEC. By 1987, these companies will provide 29,500 primary jobs. Additional employment opportunities have been created by the increased demand for services that results from the influx of people.

Many of the firms that have located here emphasize the relatively low turnover and absenteeism and high productivity of local workers. The region's higher education system is also a strong selling point: California State University, University of California, numerous community colleges and National University. SACTO has been instrumental in making interested firms aware of these and other assets of the Capitol City region.

AMY KLAUSNER

Partnerships Between the American Electronics Association and the Community Colleges

Amy Klausner is a technical training consultant for the American Electronics Association (AEA). Ms. Klausner was manager of AEA's Training Consortium, a program administered jointly with Mission College to upgrade assemblers and technicians from four local electronics companies. Prior to joining AEA, Ms. Klausner was training coordinator for ITEK Applied Technology Division and director of the Bay Area Cooperative Education Clearing House.

Amy Klausner
Technical Training Consultant
American Electronics Association

Over the last several years, the American Electronics Association (AEA) has piloted several programs bringing together industry and the community colleges.

CWETA Program. Perhaps the largest industry-education partnership undertaken by AEA is its management of CWETA programs during the past several years. Four of AEA's member firms worked with Mission Community College to establish a program to upgrade their employees' skills. The training was done by company instructors credentialed by Mission College and took place at both the company site and the campus.

Curriculum Guidebook. In response to a need expressed by both industry and education to streamline, update and standardize electronic technology curriculum, a working committee was formed of industry trainers and technicians and community college instructors. The result was a core curriculum guidebook, which is now used by industry trainers and community college instructors to update or create courses.

Instructor Bank. A West Valley College instructor and AEA cooperated in developing a bank of industry people interested in teaching electronics at the community college level. AEA received tremendous response from the private sector, finding that many industry people were unaware of their qualifications to teach part-time and the procedures for becoming an instructor.

Equipment Bank. AEA established an Equipment Bank, whereby companies could donate needed equipment to local community colleges. They found that many companies need tax incentives to donate equipment.

There are some actions which can be taken by the community colleges to enhance industry-education partnerships: collecting supply data, developing an effective evaluation model, establishing a currency formula for instructors, encouraging the Legislature to give training money directly to service deliverers, and encouraging curriculum updating by advisory committees made up of local industry representatives.

Elinor Glenn, Member
Employment Training Panel

ELINOR M. GLENN
The Role of the Employment Training Panel

Elinor Glenn was appointed as a member of the Employment Training Panel in January 1983. She has worked as a representative for the Service Employees International Union (SEIU) for more than 25 years, emphasizing worker training and upgrading programs. Ms. Glenn also serves as national secretary of the Coalition of Labor Union Women; secretary of the Joint Training and Education Commission of Los Angeles County and SEIU; member of the Board of Directors of the Los Angeles Information and Referral Service; and member of several advisory committees of the State Apprenticeship Training Program. She is president emeritus of the Southern California Joint Council of SEIU AFL-CIO.

The Employment Training Panel (ETP) was established in January 1983 to link industry's need for trained workers with the needs of California's unemployed workers. The seven-member panel administers a $55 million a year retraining fund to support training for unemployment insurance (UI) recipients, persons who have exhausted their UI benefits and remain unemployed, and persons who are likely to be laid off and claiming UI benefits in the future.

Funding is provided for job training programs administered by employers, community colleges and appropriate private training agencies in fields that offer an opportunity for long-term career employment.

ETP has the flexibility to respond to business needs as they arise. Funding is used to retrain people with established work histories, rather than new entrants into the labor market, and is limited to direct training costs. The Panel has attempted to eliminate the bureaucratic interference that is typical of employment training programs and to keep paperwork to a minimum.

A critical point emphasized by Ms. Glenn is that the recession itself is <u>not</u> the most important economic reality; rather, it is the structural changes in the economy which are placing major industries in jeopardy and displacing many thousands of workers. There has been developing a change in industrial relations in this country stemming from the changes in our technology, which has resulted in establishing labor-management committees and structures to solve the needs of workers, industry and economic development in general.

America is the only advanced country that does not have a serious training and retraining policy. We must establish a conscientious policy, which emphasizes a policy of examining the changing technology and the importance of training and retraining workers to meet those needs, and to develop the perception that workers and employers are facing continuing education as a means to achieve it. We are in the midst of an industrial and economic crisis with the possibility of solutions and plans to deal with it. We must not lose this opportunity.

GERALD HAYWARD

Overview of Community College-Industry Partnerships in California

Gerald Hayward, Chancellor
California Community Colleges

Gerald Hayward, chancellor of the California Community Colleges since January 1980, has long been involved in education and in the Legislature. Prior to his appointment as chancellor, he served as director of government and public affairs for the California Community Colleges. He was also a consultant to the Senate Committees on Education and Finance. In earlier years, Mr. Hayward worked at the high school level as a teacher, department chairman, director of student activities and federal projects coordinator.

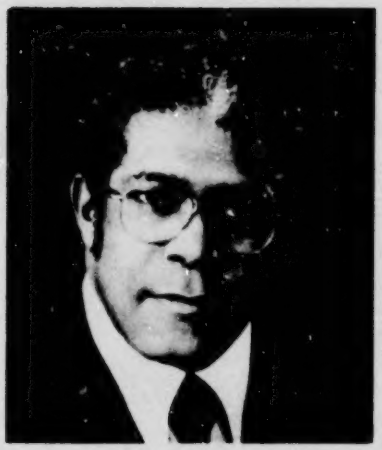
California is faced by a tremendous challenge: to train new workers, retrain the unemployed and upgrade the skills of the currently employed. In order for this challenge to be met, it is critical that all sectors work together (i.e., business, labor, educational institutions). We have become mutually dependent upon each other.

There are a number of hindrances to effective vocational training programs in the community colleges. A major hindrance is funding. Not only is funding insufficient, it is provided through complex and ever-changing avenues. In the past 12 years, the community colleges have had to adjust to about 8 different funding mechanisms. Without a stable funding base, it is impossible to accomplish long-term planning and policy development.

Vocational programs must be staffed by qualified, up-to-date instructors. The community colleges need to reexamine their credential requirements and, if necessary, their tenure policies. Without currently trained instructors, there is little hope for currently trained students.

Community colleges also are hindered by the fact that they must expend a good deal of time and money on remedial courses. The lower grades (K-12) should be fulfilling the remedial education needs of students, allowing the community colleges to focus their efforts on technical skills training.

There are some examples of on-going vocational efforts involving community colleges and the public sector such as Project CARE, a training program for welfare mothers. More cooperative efforts must be undertaken if we are to meet the challenge of training and retraining California's workforce.



Senator Bill Greene, 29th District

SENATOR BILL GREENE

Employment Training and the Legislature

Senator Bill Greene has represented the 29th District since 1975, after having served as an Assemblyman for 8 years. He is chairman of the Senate Industrial Relations Committee and the Finance Subcommittee on Health and Welfare. His committee memberships include Governmental Organization, Finance, Housing and Urban Affairs, and Elections and Reapportionment. Prior to election, Mr. Greene served as clerk to the Assembly, consultant to former Assembly Speaker Jesse Unruh, and legislative assistant to former Lieutenant Governor Mervyn Dymally.

To best understand the goals of this conference, one must first examine the goals of manpower policy in the post World War II period. From 1947 to 1980, national income tripled, and the size of the workforce expanded from 59 million to 93 million. Unfortunately the benefits from both the labor market and output expansions were not shared equally by all Americans such as Blacks, Browns, women and the handicapped. The public policy goal in manpower during this era was one of equity. During this period, most of the people served by manpower policies formed a relatively homogeneous grouping. Basically all, including the young, were on the periphery of the workforce attempting to enter the world of work.

By the end of the 1970s, Californians found that the ever-rising number of plant closures were creating what is described in the press as a "new class of poor" (i.e., workers who had successfully entered the labor market and fully enjoyed the fruits of their labor). These were skilled workers who had successfully adjusted to the disciplinary demands of the workplace. As an example, consider the recent closure of the Ford plant in Milpitas. Approximately 80% of the employees had been with Ford for at least 10 years. A staggering 25% had been with the company for more than 25 years. This class of people is far different than the unemployed who traditionally have been served by manpower training efforts.

Displaced workers need assistance in order to successfully reenter the workforce. Their skills must be evaluated, while at the same time the manpower needs of industry must be precisely categorized. If a completely successful match is to be made between the supply of labor and demand for labor, worker skills must be upgraded as needed. This can only be done when employers and training deliverers cooperate to design effective training programs.

FORUM DISCUSSIONS: SUMMARY OF PROBLEMS AND SOLUTIONS

The afternoon forums provided participants with an opportunity for informal discussion of six topical areas:

- funding
- governance
- private sector involvement
- use of new technologies
- labor market data needs
- curriculum/teaching

Participants identified specific problems related to each of these topics along with potential solutions. There is necessarily some overlap between the topics; for example, funding and governance of the community colleges are closely linked.

Forum Discussion

FORUM A: FUNDING

There are at least three major policy issues related to public and private support of community college occupational training programs: (1) statewide policy goals for cooperative employment training; (2) explicit goals and objectives regarding the mission and role of community colleges as providers of occupational training; and (3) resource allocation supporting public/private training programs. Within the context of these issues, workshop participants identified problems regarding existing mechanisms for funding training programs and solutions to overcome these problems.

(1) Lack of Cohesive, Statewide Policy for Employment Development. Because of the absence of explicit state policy goals in this area, funding is diluted among a variety of programs. There was general agreement among participants that we need a cohesive state policy that defines industry needs in terms of pre-entry, entry and re-entry level skills. Funding, furthermore, should be more closely tied to identified training needs.

(2) Lack of Clear Goals and Objectives Regarding the Mission and Role of the Community Colleges. The role of the community colleges in the state's overall training effort is not clearly defined. Forum participants emphasized that the state must specify their role as providers of occupational training and establish funding priorities consistent with training goals.

Within the framework of this general role, there must be enough flexibility to allow community colleges to respond to specific local training needs. Differential funding mechanisms should be established to target funding to areas of need, such as a specific industry or region.

(3) Lack of a Stable and Adequate Funding Base. This was regarded as a major obstacle to community college employment training programs. Currency in equipment and facilities--which cannot be maintained without adequate funding--was deemed essential to program quality. It is essential that adequate public support be provided through state revenues. However, the community colleges should attempt to reduce their reliance on the existing unstable government funding. New funding mechanisms which should be considered include:

- Cooperative use of equipment and facilities between private and public sector or between several college campuses.
- Tax incentives to private sector for equipment and facilities donation or use.
- Partial payment by employers for specialized training.
- Deferred payment for training by students after they obtain jobs.
- Private foundations such as those used at the primary and secondary levels.

Many forum participants indicated that there should be greater control of funding at the local level. All too often, the statewide regulations associated with funding are not equally appropriate throughout the state. Rural areas in particular have needs that are inconsistent with more urban areas. The importance of local control is discussed more thoroughly in the following section on governance.

FORUM B: GOVERNANCE

The community colleges are subject to policy guidance by agencies at the federal, state and local levels. Each agency maintains its distinct funding and administrative structure, often leading to conflicting signals about the mission and responsibilities of the colleges.

Private industry may influence community college decisions through various institutional and informal avenues. One avenue of influence, the program advisory committees, has had varying effectiveness.

(1) Duplication of Effort. In most areas of California, there are multiple federal, state and local service delivery systems for employment training. Each system has its own "vertical hierarchy"; that is, funding and administrative decisions filter down from top to bottom, without interacting with other training agencies.

Each agency also involves some variation of advisory group or private sector participation. This approach has created considerable duplication

of effort at the local and state levels, eroding the effectiveness of both advisory groups and private sector participation.

Industry representatives are asked to participate in so many groups that they may not be effective. A clearer and more effective means of gaining private sector participation must be utilized if cross-communication of private sector needs and community college capability is to occur.

(2) Competition for Funding. The multiple funding sources for employment training efforts both within and outside the community colleges lead to competition between agencies and factioning of service delivery. Competition for resources and delivery of services becomes necessary to maintain solvency, particularly as funding is diminished. Each agency develops its own "constituency" or support network to advocate legislative and funding support.

One example of dual vertical funding is the federal Jobs Training Partnership Act Program and the State Vocational Education Program. While there are several other prominent programs serving California, these show the most obvious duplication.

It is likely that our training efforts would be far more effective if a single system was responsible for all service delivery. Alternately, we might establish a system to coordinate resources from various funding agencies and minimize the duplication of efforts that occurs at the local level.

(3) Conflicting Policies. Another outcome of multiple funding sources is the lack of any single set of priorities. The priorities that do emerge, based on funding and administrative requirements, have little connection with the needs of employers and the general labor market.

Priorities should be established by answering several key questions:

What is the formal process for determining industry training needs?

What are the short- and long-term labor market demands?

Who is responsible for assessing business and industrial training needs and labor demands?

(4) Lack of Effective Private Sector Involvement. Program advisory committees are used throughout the community college system as a decisionmaking group. In some instances, the groups have become isolated within the education or training system, causing committee members to lose touch with employer needs.

All too often, employers do not participate in development and delivery of education and training services, taking little or no responsibility for

their results. Those employers that do participate may choose inappropriate advisors (e.g., a government relations person rather than an individual who can attack the problem with solid technical advice or resources).

It is critical that community colleges make effective use of industry representatives in an advisory capacity. These representatives should include top corporate executives who have the authority to commit policy and/or resources. They should be involved at policy, planning and operational levels.

The state should concentrate its resources on training programs that promote private sector involvement in program development and private sector responsibility for program results.

(5) An Alternative Method of Governance. There is no single, statewide strategy for governing employment training and vocational education programs. In more general terms, the employment training needs of the state cannot be resolved by a single approach. Answers must be worked out in response to the unique conditions in each "labor market area": a definable area from which the majority of companies draw their labor force.

Although there is no single strategy that would be appropriate for the entire state, we do need to define statewide goals to aid in prioritizing and focusing resources. Each labor market area may then establish its own strategies within these general goals.

(6) Information Referral Service. Although not directly related to the governance issue, participants in this forum emphasized the need for a statewide information system for referring the private sector to appropriate training services. This could be accomplished through a hot line, clearing house, advisory service or other network.

FORUM C: PRIVATE SECTOR INVOLVEMENT

The private sector must work closely with the community colleges in order for training programs to meet their needs. Yet there are many barriers that inhibit the development of partnerships between the two. Colleges must have access to up-to-date equipment and facilities that are consistent with current labor market needs.

(1) Barriers to an Improved Partnership Between Community Colleges and the Private Sector.

COMMUNICATION. A major obstacle to improving this partnership is the lack of communication between colleges and the private sector. Both sides must make an effort (e.g., the colleges must improve their outreach to industry, while industry must offer greater input to colleges). There must be reliable, on-going channels of communication for discussing the dual

mission of colleges and industry, labor market needs and curriculum planning. Communications should also tie in to the K-12 levels.

Forum Discussion

LACK OF AWARENESS. Colleges and industry must know how each perceives the other (e.g., industry's perception of the effectiveness of community college training programs). This may be done through surveys and interviews, providing valuable information to spark changes and uncovering misperceptions that can be corrected.

INADEQUATE USE OF EXISTING RESOURCES. Community colleges need to make better use of existing resources such as the industry-education councils (IECs), which were established as a partnership mechanism. Each college should designate an executive level person to serve on the local IEC. Other "communities of interest" that should be tapped include industry organizations, college associations and college program advisory committees.

RESISTANCE TO CHANGE. There are existing methods of changing college curriculum, such as the program advisory committees.

However, community colleges may be defensive about what they do, resisting change or discussion of their shortcomings. There must be a willingness to accept the input provided from outside sources.

LEVELS OF INVOLVEMENT. The private sector's partnership efforts must occur at three levels: (1) the chief executive officer, who must make a commitment to cooperate and to assist in programming and funding; (2) technical employees, who will assist in curriculum design, staffing and provision of equipment, and who must make a commitment to hire individuals trained by the colleges; and (3) personnel officers, who make many of the hiring decisions.

(2) Gaining Access to New Equipment and Facilities Needed to Teach High Technology Skills.

INNOVATION AND TAX INCENTIVES. Even when community colleges are aware of current training needs, they often lack up-to-date equipment and facilities. The colleges must be innovative in searching out equipment and facilities to rent or borrow. To assist the colleges, there should be tax incentives for industry and the public to contribute equipment and facilities.

COOPERATIVE USE. In order to keep costs down, the colleges may share equipment and facilities with each other or with the private and public sectors.

WORKSITE TRAINING. Courses in areas other than broad ranging or long-term training may be conducted at worksites taking advantage of a "real" work orientation and the use of up-to-date equipment and facilities. When

programs are conducted on site, the colleges must address industry liability and insurance issues.

(3) Areas of Potential Cooperation in Addition to Employment Training.

There may be cooperation in any area in which a "community of interest" exists. This might include areas of common interest in deregulation; provision and exchange of in-kind services such as graphics or photography; and nonfinancial matters such as industry volunteer programs. The community colleges also may offer other services that are related to employee productivity, such as drug abuse, marital or financial counseling, and recreational or athletic activities.

FORUM D: NEW TECHNOLOGIES

New technologies can and do play an important role in the colleges, both as an administrative or resource management tool and as the subject of training courses. In colleges which do not take advantage of new technologies, it may be necessary to change the conditions or attitudes that inhibit their use. Community colleges do need information about new equipment and the impact of high technology.

In terms of curriculum, there is a risk of overemphasizing the technologically oriented courses at the expense of other necessary areas of training. The range and number of technological courses should reflect labor market needs.

(1) Enhance the Flexibility, Availability and Effectiveness of Education. Technological advances allow the community colleges to reach a much wider audience and to provide a more effective education. Classes can be offered to students who are unable to reach the campuses by televising lectures to remote areas or to handicapped students and by providing individualized instruction at worksites. Several campuses may link together for joint course offerings. "Master" instructors may tape their lectures so that more students are exposed to exceptional courses.

(2) Improve Marketing of Community Colleges. There are many examples of successful employment training programs in the community colleges, many of which employ new technology. However, the some campuses have not effectively marketed their programs to industry. Many of the private, entrepreneurial universities use marketing strategies that emphasize their ability to meet private sector needs. The community colleges should consider using these approaches, along with advanced technology, in their marketing efforts (e.g., establish computer links between campuses and industry).

FORUM E: LABOR MARKET DATA NEEDS

There is a distinct lack of communication between community colleges and private industry regarding labor market needs. In the long run, the student suffers the most from obsolete or outdated training. The community colleges need to know:

- where industry is going
- what industry's employment needs are
- what it will cost to train the needed personnel, and
- where the money will come from for training.

(1) Ascertaining the Needs of Labor and Private Industry. Community college counselors bear a large portion of the responsibility for relevant training of students. However, the counselor is often unknowledgeable about occupations and career ladders and may misdirect students and instructional staff. But the brunt of the problem lies with the fact that master's programs are clinically rather than functionally oriented. As a result, the counselor is prepared to gear students toward obtaining a four-year degree and has limited knowledge in providing vocational guidance that does not require a degree.

There are potential solutions for making vocational counselors more responsive:

COUNSELOR TRAINING/RETRAINING. Reform the counseling degree program. Institute a degree program at night to offer the opportunity for entry, upgrading and retraining skills. Conduct a study on existing skills level of counselors and needed improvements. Encourage industry to help develop curriculum for counselor training programs.

INDUSTRY COUNSELORS. Encourage vocational counselors from industry to advise students who are interested in that field.

In addition to the need for keeping counselors up-to-date, it is crucial that community colleges respond rapidly to changes in the industrial workforce. Presently, the inflexibility in the educational bureaucracy hinders their ability to adapt training programs to changing needs.

(2) Information Network. There are inadequate communication linkages between industry and education regarding advanced planning. The result is that California's industry needs are being met by out-of-state schools. The fluidity of industry's planning process makes for many rapid changes. Some information is hard to obtain because of industry's competitive nature. The community colleges are not kept abreast of these changes, thereby making obsolescence of the workforce an inherent factor.

These problems must be addressed by at least three sectors: industry, teachers and high schools.

INDUSTRY. Planning for 5- to 10-year periods based on assessment of future needs and involving educators would bridge the gap of the need versus the workforce.

California has four major labor market areas: San Diego, Los Angeles, San Francisco and surrounding areas, and Sacramento. Interfacing of local community colleges and local industry would help alleviate the communications gap.

The need also exists for a centralized computer network to keep track of what skills, jobs and kind of industry need to be matched.

TEACHERS. Providing teachers with on-site industry exchange program experiences would help to maintain up-to-date knowledge on the newest state of industry skills. Opportunities for retraining of teachers would be available through the Regional Teacher Development Centers at the four-year institutions.

HIGH SCHOOLS. There is inadequate industry input into the high schools. As a result, students are not exposed to the realities of the skills and jobs needed in the workforce. Students need clear guidance since many do not know what they want to do.

Saturday workshops put on by industry and the enlargement of programs like Junior Achievement would help develop a "Big Brother" mentor system. These programs, coupled with better aptitude analysis, would result in a more occupation-wise student going into the community college.

Work experience programs also have been very successful in providing pre-career employment exposure to high school students.

(3) Private Sector Input. Local and statewide labor market data are essential to effective vocational planning. However, accurate and localized labor market needs are not readily available. Labor market information that is available is too general and typically lags six months behind current circumstances.

Sufficient funds are needed to develop and maintain information systems. It is difficult to compile labor market data if we rely solely on the private sector. Firms are sometimes unwilling to share information about their future plans because of competition with other firms. There also is a lack of common job classifications: someone referred to as a welder in one company may require very different skills than a welder in another company.

The establishment of centralized computer terminals and information exchange systems would help to maintain current supply and demand information. Upgrading and usage of the Dictionary of Occupational Titles by

industry and vocational guidance counselors would enhance their information exchange. The Jobs Training Partnership Act provides an opportunity for local and statewide information exchange through its Service Delivery Areas.

Industry has the opportunity to provide input through "Adopt a School Programs" where entire schools are taken on as a special project for executive/faculty exchange, student work experience programs and vocational counseling. Junior Achievement programs are an excellent means of exposing high school students to the work world. These programs should be expanded to include a broader range of students than simply the top achievers.

The private sector representatives may become involved by serving as instructors in the community colleges, particularly during evening hours. The opportunity for obtaining entry-level or upgraded skills would be more readily available with vocational programs being offered at night school.

Institution of degree programs at night would offer the opportunity for entry, upgrading and retraining skills.

FORUM F: CURRICULUM/TEACHING

Once the colleges have obtained current information on labor market needs, they must provide relevant curriculum and instructors to address these needs. Courses must be continually redesigned, evaluated and updated, and instructors must receive up-to-date retraining so that they remain relevant to the changing needs of the labor market. Currently, there are barriers that inhibit this flexibility. Colleges must also teach students the basic skills and work habits that are required by potential employers.

(1) Design, Evaluation, Updating and Elimination of Courses. The community colleges do review curricula on a regular basis, obtaining input from the community through program advisory groups. The advisory groups, however, tend to defend what is currently being done, and generally do not obtain input from private industry. It is critical that the colleges obtain industry validation of curriculum content and standards.

This process also must rely upon on-going assessments of labor market needs, using existing sources such as the Department of Labor and the Employment Development Department, along with information obtained directly from local employers. Colleges need considerably more supply-side information from industry.

Academic floors or benchmarks also should be part of the course development.

(2) Up-to-Date Training of Instructors. Colleges should use nontraditional methods of training instructors, such as industry internships or integrated computer instruction. Instructor training and retraining may also be enhanced by making greater use of sabbaticals, release time and industry exchange programs (e.g., loan executives to perform instructor training, allow instructors and industry personnel to exchange jobs temporarily). Tax incentives are another mechanism for encouraging instructors to maintain up-to-date knowledge in their field.

(3) Mechanisms and Standards for Insuring That Potential Employees Have Adequate Basic Skills and Work Habits. Industry and labor representatives must be actively involved in establishing skill levels and competencies. Community colleges should coordinate with the K-12 levels so that appropriate skills are taught prior to college entry.

In order to assure that students actually assimilate these skills, community colleges should consider using a competency base rather than the traditional grade base.

EPILOGUE

To ensure the building of a closer partnership linking government, business and community colleges, a follow-up Task Force has been established. The Task Force is composed of a select group of conference participants. Each of the members has been actively involved through his/her respective organizations in establishing the foundation for this partnership.

The mission of the Task Force is to develop proposals based on the recommendations made during the Partnership Conference. These proposals will be the basis of recommendations for legislative action.

TASK FORCE MEMBERS

Dr. David Mertes, Chancellor
Los Rios Community College
District

Mr. Alan Ewen
Executive Director
Sacramento Area Commerce and
Trade Organization

Ms. LaJune Bush
Governmental Affairs
Administration
Hewlett-Packard

Dr. E. Garreth Hoachlander
MDR Associates

Mr. Gerald C. Hayward, Chancellor
California Community Colleges

Mr. Tom B. Timar
Director of Governmental Affairs

Ms. Maureen Frisch
TRW Inc.

Dr. Clare Rose, President
Evaluation and Training Institute

Dr. David Stern
School of Education
University of California
at Berkeley

If you would like any further information about the Task Force, please contact the Senate Office of Research, 1100 J Street, Suite 500, Sacramento, CA 95814, (916) 445-1727.

APPENDIX

List of Conference Participants

Nancy Bartlett
American Medical International

Leonard C. Beckum
Far West Laboratories

Lee Beringsmith
American Bell

Joe Berney
Industry Education Council of California

Robert L. Bloom
Alameda County Training and Employment Board

Tom Bogetich
California Advisory Council on Vocational Education

Bob Boostrom
Northrop Electro-Mechanical Division

Jeanne Boyce
Joint Committee on Science and Technology

Douglas Burris
Sacramento City College

Jerry Burroni
Marin Community College District

LaJune Bush
Hewlett-Packard

Nancy Carlton
Yolo County Manpower Division

Leadie Clark
North Orange County Community College District

Kathy Comstock
California Manufacturers Association

Don E. Conner
Kelco Division of Merck and Company

David Cothrun
West Kern Community College District

W. Dean Cunningham
Columbia College

Lynn DeLapp
Assembly Office of Research

Peter deWetter
National Medical Enterprises, Inc.

Ernie Droege
Electronic Training Consultants

Tyra Duncan-Hall
San Francisco Community College District

Steve Duscha
Employment Training Panel

Davida Egherman
RSU 3

Roger Ferragallo
Peralta Community College District

Robert Fisher
Saga Corporation

Jack Fleming
Moorpark Community College District

Alan Foster
American Electonics Association

Bob Fredenburg
Joint Committee on Science and Technology

Maureen Frisch
TRW Inc.

Marcia Fritz
Arthur Young & Company

Jack Fujimoto
West Los Angeles College

Tom Garcia
General Telephone Company

Hal Geiogue
Legislative Analyst's Office

Jack Germain
Senator Ollie Speraw's Office

Elinor M. Glenn
Employment Training Panel

Senator Bill Greene
29th District

John Griffing
Senate Office of Research

Marc E. Hall
Los Rios Community College District

Del Ray Hammons
Signetics Corporation

Tom K. Harris, Jr.
Long Beach City College

Jon Heinrich
Hewlett-Packard

Manuel Hernandez
Assembly Office of Research

Carolyn Hollins
San Diego Gas and Electric

Hilary Hsu
San Francisco Community College District

Robert Jensen
American River College

Dorothy M. Jessie
Business Labor Council

Louis Johnson
American River College

Elisabeth Kersten, Director
Senate Office of Research

Jim King
Assembly Committee on Economic Development and New Technologies

Amy Klausner
American Electronics Association

Aurelia Koby
Private Industry Council

Carla Kraus
Pacific Telephone Company

Joel Kugelmass
California Public Broadcasting Commission

Althea A. Lewis
California Indian Manpower Consortium

Jonathan Lewis
Lewis and Associates

Leonard Linden
Bank of America

Esther Lujan
Employment Development Department

Herb Mack
Lockheed California Company

Ernie Matlock

John McCoy
Assembly Office of Research

James I. McWilliams
Lockheed Missiles & Space Co., Inc.

John Petersen
Cabrillo College

Robert Pola
Kaiser-Permanente

Donna Pomerantz
Senate Office of Research

John L. Prentiss
Chancellor's Office
California Community Colleges

Kim Prescott
Private Industry Council

Jean Prinvale
Senator Ray Johnson's Office

Joselle Prinzing
Senate Office of Research

Bill Quirk
Communication Workers of America

Teresa Rooney
Senate Office of Research

Brian Sakai
Educational Microcomputer Association

Elsie Schneider
Modesto Junior College

Eugene Schumacher
College of the Siskiyous

Rick Simpson
Senate Office of Research

Rebecca Singleton
Chancellor's Office
California Community Colleges

Warren Sorrenson
Lassen Community College

Clair Stevens
California Occupations Information Coordinating Committee

Barbara Mertes
Valley Campus

David Mertes
Los Rios Community College District

Ernest Meylan
Foothill Corridor Marketing Consortium

Donald Milanese
Chabot College

Jack Monahan
NEC Electronics USA, Inc.

Ben Munger
Senate Industrial Relations Committee

Ken Murray
Redding Area Development Commission

Philip C. Nash
Monterey Peninsula College

Joshua Newman
Assembly Committee on Economic Development and New Technologies

A. Michael O'Reilly
Private Industry Council

Grace Ohlson, Trustee
Los Rios Community College District

Bonnie Oliver
California Public Broadcasting Commission

Vincent P. Padilla
Cosumnes River College

Robert Parker
Beverly Enterprises

Ed Pearce
Cuesta College

George S. Stewart, Trustee
Los Rios Community College
District

William Storey
California Postsecondary
Education Commission

Barbara Sullivan
Chancellor's Office
California Community Colleges

Nancy Swadesh
San Francisco Community
College District

Linda Thor
Los Angeles Community College
District

Thomas B. Timar
California Association of
Community Colleges

Ron Ulrici
Aerojet Liquid Rocket Company

Dale Van Natta
TRW Inc.

Cheryl Volk
Chancellor's Office
California Community Colleges

Thomas J. Walsh, Jr.
Pacific Gas and Electric Company

Lawrence Wanlass, Trustee
Los Rios Community College
District

Vicki Warner
Warner and Wiecking Associates

Willie Washington
Pittsburgh Des Moines Corporation

Norman Watson
Coast Community College District

William Wilson
Solano Community College

Paul Witkay

Don Woodside
Joint Committee on State's Economy

Saxon Wraith
Southwestern College

Robert Wyman
Los Rios Community College
District

Linda Zaich
Union Bank

ERIC Clearinghouse for Junior Colleges
8118 Math-Sciences Building
University of California
Los Angeles, California 90024

MAY 04 1984